

ANALISIS KOORDINASI ANTAR SIMPANG BERSINYAL
(Studi Kasus: Simpang Rancabango dan Simpang Bantar,
Kota Tasikmalaya)

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ABSTRAK

Banyaknya persimpangan di Kota Tasikmalaya, khususnya Simpang Rancabango dan Simpang Bantar yang berdekatan, menyebabkan kendaraan sering terhenti di setiap simpang akibat sinyal merah. Untuk mengurangi tundaan dan antrean, dilakukan analisis koordinasi antar simpang bersinyal. Data diperoleh melalui survei lapangan pada tanggal 21 April 2025 hingga 6 Mei 2025, mencakup data geometrik, waktu sinyal, volume lalu lintas, dan kecepatan kendaraan. Analisis dilakukan menggunakan Pedoman Kapasitas Jalan Indonesia 2023. Hasil menunjukkan kedua simpang belum terkoordinasi. Dari tiga perencanaan, diperoleh waktu siklus baru sebesar 71 detik dengan *offset* sebesar 60 detik antara Simpang Rancabango dan Simpang Bantar serta *bandwidth* sebesar 18 detik untuk arah pergerakan dari Simpang Rancabango menuju Simpang Bantar dan 31 detik untuk arah sebaliknya. Dengan diterapkannya koordinasi antar simpang bersinyal, kinerja simpang menunjukkan peningkatan, ditandai dengan penurunan panjang antrean kendaraan dari 69,22 meter menjadi 62,39 meter serta penurunan tundaan rata-rata dari 36,75 detik/SMP menjadi 35,63 detik/SMP.

Kata Kunci : Koordinasi Sinyal, Panjang Antrean, Tundaan

ANALYSIS OF COORDINATION BETWEEN SIGNALIZED INTERSECTIONS

***(Case Study: Rancabango Intersection and Bantar Intersection,
Tasikmalaya City)***

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ABSTRACT

The large number of intersections in Tasikmalaya City, particularly the nearby Rancabango and Bantar intersections, causes vehicles to frequently stop at each intersection due to red lights. To reduce delays and queues, an analysis of coordination between signalized intersections was conducted. Data was collected through field surveys conducted from April 21, 2025, to May 6, 2025, covering geometric data, signal timing, traffic volume, and vehicle speed. The analysis was conducted using the 2023 Indonesian Road Capacity Guidelines. The results showed that the two intersections were not yet coordinated. From the three plans, a new cycle time of 71 seconds was obtained with an offset of 60 seconds between the Rancabango Intersection and the Bantar Intersection and a bandwidth of 18 seconds for the direction of movement from the Rancabango Intersection to the Bantar Intersection and 31 seconds for the opposite direction. With the implementation of coordination between signalized intersections, intersection performance showed improvement, marked by a decrease in vehicle queue length from 69.22 meters to 62.39 meters and a decrease in average delay from 36.75 seconds/SMP to 35.63 seconds/SMP.

Keywords : *Signal Coordination, Queue Length, Delay*